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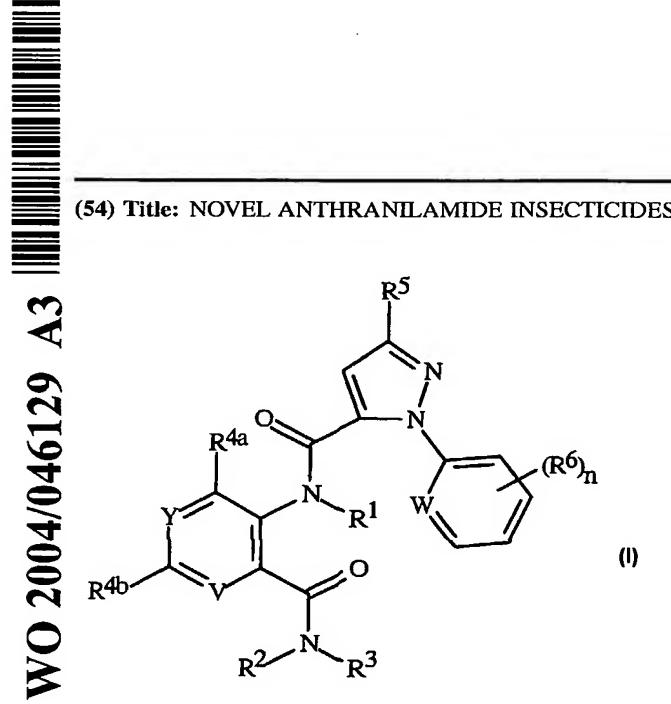
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(54) Title: NOVEL ANTHRANILAMIDE INSECTICIDES



(57) Abstract: This invention provides compounds of Formula I, N-oxides and suitable salts thereof (INSERT FORMULA I HERE) whereinY and V are each independently N or CR4a; W is N, CH or CR₆; and R₁ through R₆, and n are as defined in the disclosure. This invention also pertains to a composition for controlling an invertebrate pest comprising a biologically effective amount of a compound of Formula I, an N-oxide thereof or an agronomic or nonagronomic suitable salt of the compound and at least one additional component selected from the group consisting of a surfactant, a solid diluent and a liquid diluent, and optionally further comprising an effective amount of at least one additional biologically active compound or agent. Also disclosed are methods for controlling an invertebrate pest comprising contacting the invertebrate pest or its environment with a biologically effective amount of a compound of Formula I, an N-oxide thereof or an agronomic or nonagronomic suitable salt of the compound or with the composition described herein.

INTERNATIONAL SEARCH REPORT

Inter	nal	Application No
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. According to International Patent Classification (IPC) or to both national classification and IPC					
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	ata base consulted during the international search (name of data bases).	se and, where practical, search terms used)			
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C. DOCUM	ENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate, of the rele	evant passages	Relevant to claim No.		
P,X	WO 03/015518 A (SELBY THOMAS PAUL;STEVENSON THOMAS MARTIN (US); DU PONT (US); LAH) 27 February 2003 (2003-02-27) the whole document		1-15		
P,X	WO 03/024222 A (BERGER RICHARD ALAN ;DU PONT (US); FLEXNER JOHN LINDSEY (US)) 27 March 2003 (2003-03-27) the whole document		1-15		
E	WO 03/106427 A (PASTERIS ROBERT JAMES; STEVENSON THOMAS MARTIN (US); DU PONT (US);) 24 December 2003 (2003-12-24) the whole document		1-15		
P,A	WO 02/094791 A (DU PONT ;CLARK DAVID ALAN (US)) 28 November 2002 (2002-11-28) claims 1-14; examples 1,2; tables 1-9		1-15		
	her documents are listed in the continuation of box C.	Y Patent family members are listed in	annex.		
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but		 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family 			
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Inter	na	Application No	
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Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Ρ,χ	WO 03/015519 A (SELBY THOMAS PAUL;STEVENSON THOMAS MARTIN (US); DU PONT (US); LAH) 27 February 2003 (2003-02-27) the whole document	1-15
Ρ,Χ	WO 03/016282 A (SELBY THOMAS PAUL;STEVENSON THOMAS MARTIN (US); DU PONT (US); ANN) 27 February 2003 (2003-02-27) page 3, line 13 - page 3, line 15 page 17, line 4 -page 19, line 8; claim 35	1-15
P,X	WO 03/016283 A (SELBY THOMAS PAUL;STEVENSON THOMAS MARTIN (US); DU PONT (US); FRE) 27 February 2003 (2003-02-27) page 3,line 8 - page 3, line 9 page 27, line 4 -page 29, line 7; claim 22	1-15
P, X	WO 03/016284 A (STEVENSON THOMAS MARTIN; DU PONT (US); SONG YING (US); FINKELSTEIN) 27 February 2003 (2003-02-27) the whole document	1-15
X .	WO 01/70761 A (FLOWERS ROBERT A II; UNIV TOLEDO (US); SUMMERS CATHERINE ANNE (US)) 27 September 2001 (2001-09-27) cited in the application claims 1-43; tables 9,,D,E the whole document	1-15
X	WO 02/070483 A (DU PONT ; ANIS GARY DAVID (US); FINKELSTEIN BRUCE LAWRENCE (US)) 12 September 2002 (2002-09-12) the whole document claims 1-26; example 5; tables 17,20-23	1-15
A	EP 0 287 851 A (BAYER AG) 26 October 1988 (1988-10-26) the whole document	1-15

INZERNATIONAL SEARCH HEPORT

onal Application No

Inter

Information on patent family members

/US 03/36167 Patent document **Publication** Patent family **Publication** member(s) cited in search report date date WO 03015518 A 27-02-2003 CA 2454298 A1 27-02-2003 CA 2454302 A1 27-02-2003 CA 2454306 A1 27-02-2003 CA 2454485 A1 27-02-2003 MO 03016282 A2 27-02-2003 WO 03015518 A1 27-02-2003 WO 03016283 A1 27-02-2003 WO 03015519 A1 27-02-2003 WO 03024222 27-03-2003 WO 03024222 A1 Α 27-03-2003 WO 03106427 24-12-2003 WO A 03106427 A2 24-12-2003 WO 02094791 28-11-2002 BR A 0209912 A 06-04-2004 EP 1389190 A1 18-02-2004 WO 02094791 A1 28-11-2002 WO 03015519 27-02-2003 2454298 A1 Α CA 27-02-2003 2454302 A1 CA 27-02-2003 CA 2454306 A1 27-02-2003 2454485 A1 CA 27-02-2003 WO 03016282 A2 27-02-2003 WO 03015518 A1 27-02-2003 WO 03016283 A1 27-02-2003 MO 03015519 A1 27-02-2003 WO 03016282 27-02-2003 Α CA 2454298 A1 27-02-2003 2454302 A1 CA 27-02-2003 CA 2454306 A1 27-02-2003 CA 2454485 A1 27-02-2003 WO 03016282 A2 27-02-2003 WO 03015518 A1 27-02-2003 WO 03016283 A1 27-02-2003 WO 03015519 A1 27-02-2003 WO 03016283 Α 27-02-2003 CA 2454298 A1 27-02-2003 CA 2454302 A1 27-02-2003 CA 2454306 A1 27-02-2003 CA 2454485 A1 27-02-2003 WO 03016282 A2 27-02-2003 WO 03015518 A1 27-02-2003 WO 03016283 A1 27-02-2003 WO 03015519 A1 27-02-2003 WO 03016284 27-02-2003 WO 03016284 A1 27-02-2003 WO 0170761 27-09-2001 WO 0170761 A1 27-09-2001 WO 02070483 A 12-09-2002 BR 0207996 A 02-03-2004 CA 2437840 A1 12-09-2002 EP 1373210 A1 02-01-2004 HU 0303183 A2 29-12-2003 WO 02070483 A1 12-09-2002 EP 0287851 26-10-1988 DE Α 3711928 A1 20-10-1988 EP 0287851 A1 26-10-1988 JP 63258859 A 26-10-1988